

Abstract of the Disclosure

A specimen culturing system and method is employed to culture biological specimens, preferably embryos. The embryos are cultured in an incubator in separate culturing sites, such as wells, which can each hold an embryo container, such as a Petrie dish, that contains one or more of the embryos. The culturing wells are disposed in one or more shelves in the incubator. The culturing containers are formed from a transparent material such as tempered glass. Each of the wells are provided with embryo development-monitoring adjuncts. The development-monitoring adjuncts are preferably embryo-imaging devices and sound-monitoring devices. The system includes image and sound recording components which can record periodic images of the embryos during the culturing cycle; and can record sounds emanating from the specimens. The embryo-imaging devices can include CCD imaging devices which are connected to image viewing and recording adjuncts by means of electrical connections. Each embryo development-monitoring site in the incubator can be provided with its own CCD embryo-imaging device which can be periodically activated by an incubator processor controller to produce and record images of the embryos at selected time intervals during the culturing cycle. The sound monitoring can be performed periodically or continuously during the culturing cycle. Both the imaging and sound monitoring can be recorded, and the resultant data can be chronologically stored so that a technician can monitor and review the embryo development without having to remove the embryos from the incubator. Images and audio signals can be digitized and transmitted from the incubator to remote worldwide sites for expert analysis and evaluation.

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